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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,326	05/10/2001	Robert M. Martin	8138-PA01	7383

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EXAMINER	
LE, DANG D	

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 10/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/853,326	MARTIN, ROBERT M.	
	Examiner	Art Unit	
	Dang D Le	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 September 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrews in view of Morgan.

Regarding claim 1, Andrews shows an electromagnetic motor (Figures 1-16), comprising:

- An outer housing (Figure 11) having a central axis and opposite end walls (left and right);
- A shaft (16) rotatably mounted in the housing to extend along the central axis and projecting out through one end wall (left) of the housing;
- A plurality of electromagnets (40, 42, 44) extending parallel to the shaft and mounted at spaced intervals in an annular ring (Figures 2 and 3) centered on the central axis and spaced radially outwardly from the shaft (Figures 1-3);

- An elongate rotor member (12) of ferromagnetic material (iron, column 2, lines 49-52) secured to the shaft and projecting radially outwardly from the shaft in opposite directions (top-bottom, left-right) to extend up to the annular ring of electromagnets, the rotor having opposite ends (30a-30d, 30b-30e, 30c-30f) located adjacent the ring of electromagnets;
- A power supply (346); and
- A switching assembly (268, Figures 4-9) for connecting the power supply to successive pairs of diametrically opposed electromagnets in order to attract the opposite ends of the rotor to successive activated electromagnets in the ring, whereby the rotor and shaft are rotated in a predetermined direction.

Andrews does not show a single, elongate, linear rotor member projecting radially outwardly from the shaft in two opposite directions, the rotor having only two opposite ends, whereby the rotor ends are located adjacent only two diametrically opposed electromagnets at any time as the rotor rotates; and the switching assembly activating each pair of diametrically opposed electromagnets in sequence around the ring, such that the ends of the rotor are attracted to successive activated opposed pairs of electromagnets in turn around the ring. Andrews uses six-pole rotor although indicates that two-pole rotor could also be used in column 2, lines 55-60.

Morgan shows a single, elongate, linear rotor member projecting radially outwardly from the shaft in two opposite directions (Figure 2), the rotor having only two opposite ends (N and S), whereby the rotor ends are located adjacent only two diametrically opposed electromagnets at any time as the rotor rotates (Figure 2); and

the switching assembly (Figure 7) activating each pair of diametrically opposed electromagnets in sequence around the ring, such that the ends of the rotor are attracted (Figure 4, N vs. S) to successive activated opposed pairs of electromagnets in turn around the ring for the purpose of making an electromagnetic indicator.

Since Andrews and Morgan are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to replace the six-pole rotor of Andrews with the two-pole rotor of Morgan for the purpose discussed above.

Regarding claim 2, it is noted that Andrews also shows a speed control device (Figures 4-8) between the power supply and electromagnets in order to control the speed of rotation of the shaft.

Regarding claim 5, it is noted that Andrews also shows the outer housing having an inner cylindrical wall (Figure 11) and the electromagnets being arranged in said annular ring around the inner wall of the housing.

Regarding claim 6, it is noted that Andrews also shows each electromagnet having a metal core (44) and an outer winding (42), the metal core having one end projecting out of the winding (left, Figure 11), and the opposite ends (30a-30f) of the rotor being positioned to move in a circular path extending adjacent the projecting ends of the electromagnet cores.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrews in view of Morgan as applied to claim 1 above, and further in view of Bates.

Regarding claim 3, the motor of Andrews modified by Morgan includes all of the limitations of the claimed invention with the switch assembly comprising a plurality of electrical contacts (308) equal in number to the number of electromagnets (Figure 10), the contacts being arranged in the housing in an annular ring centered on the central axis, the contacts being positioned in diametrically opposed pairs except for a linear, elongate contact wiper rotatably mounted at the central axis so as to extend radially in opposite directions from the axis and to successively contact each pair of diametrically opposed contacts around in the ring in sequence, each opposing pair of contacts being electrically connected to a respective opposing pair of electromagnets in a respective circuit separated from all other circuits in the switch assembly, and the wiper being connected to the power supply, whereby diametrically opposed pairs of electromagnets are activated in sequence around the ring in order to attract the rotor member to the next successive adjacent opposed pair of electromagnets in turn around the ring. Andrews uses a brush (306).

Bates shows a linear, elongate contact wiper (11) rotatably mounted at the central axis so as to extend radially in opposite directions (Figure 3) from the axis and to successively contact each pair of diametrically opposed contacts (21) around in the ring in sequence, each opposing pair of contacts being electrically connected to a respective opposing pair of electromagnets (armature windings 30) and the wiper (11) being connected to the power supply (through T1), whereby diametrically opposed pairs of electromagnets are activated in sequence around the ring for the purpose of providing an electrical connection between two components.

Since Andrews, Morgan and Bates are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the wiper (11) to connect the power supply to the electromagnets as taught by Bates for the purpose discussed above.

Regarding claim 4, it is noted that Bates also shows the wiper (11) being secured to the shaft (4, Figure 2).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
October 13, 2002

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